

Appln No 10/040,405
Amdt Dated September 16 2003
Reply to Office action of July 9, 2003

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Amendments to the Specification:

The paragraph beginning at Page 6, line 9, to be amended as follows:

An array of caps 48 is formed using conventional injection molding methods and steel mold tools 50 & 52. The caps are supported on a sprule 54 at the same nominal spacing as the groups 42. Using this method will almost invariably lead to misalignment with resulting destruction of MEMS devices, as shown in figure 720. In figure 720 the cap 48a has been aligned correctly with its group of MEMS devices 42a. However the spacing between the caps is greater than the spacing of the groups so that cap 48b is not aligned correctly, but does not destroy any of the MEMS devices of its respective group 42b. However, the caps 44c & d are sufficiently misaligned that the perimeter walls of the caps overlay one or more of the MEMS devices 44, destroying their functionality.

The paragraph beginning at Page 6, line 18, to be amended as follows:

This misalignment can be the result of a number of ~~actors~~factors, including differential thermal expansion of the sprule material compared to the silicon wafer, non rigidity of the molded components and the lack of machinery designed for accurate alignment and bonding of polymers to wafers using these techniques.

The paragraph beginning at Page 9, line 24 through to Page 10, line 2, to be amended as follows:

As previously mentioned, the molding wafers 102 & ~~102~~104 are formed using conventional lithography and deep silicon etching techniques. The accuracy of this process is dependant on the lithography and the resist used. The etch selectivity of silicon versus resist is typically between about 40:1 and about 150:1, requiring a resist thickness for a 500 μm thick etch of between about 15 μm and 4 μm respectively. Using a contact or proximity mask, critical dimensions of around 2 μm can be achieved. Using steppers, electron beam or X-ray lithography the critical dimensions can be reduced to less than a micron. Thus the material 134 may be squeezed out totally from between the portions 114 & 116, totally separating the adjacent caps 136. Alternatively a thin layer 140 up to about 2 microns thick may be left between the portions 114 & 116 between adjacent caps 136 due to the variation in position of the relative surfaces due to manufacturing tolerances.